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# Evaluation of grasslands of Mahboobnagar district, Telangana state

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## Introduction

Telangana state is gifted with rich livestock resources; 50.3 lakh cattle, 41.9 lakh buffaloes, 128.7 lakh sheep and 46.7 lakh goats ( Livestock census, 2012).The district of Mahboobnagar in this newly formed State is known for its huge cattle, sheep and goat population. The district ranks first in sheep (37, 30,689) and goat (6, 87,066) population among all districts of state, though ranks second and sixth in cattle and buffalo population, respectively (Live stock census, 2012). The most common sources of fodder to feed these livestock are crop residues (68%), forages from common property resources (CPRs) like forests, pastures and grazing lands (25%), cultivated fodders (3%) and other feeds such as concentrates etc contributes 4%. Though the area under fodder crops is significantly high in this district (24,153 ha), there is a wide gap between the demand and supply. The cultivated forage crops are fed inevitable to cattle while sheep and goat are often fed exclusively by grazing. Owing to <700mm annual rainfall and aberrations in climate, the area under natural pastures and grasslands is shrinking; is just 17,560 ha population (LUP Report, 2013-14)which seldom supports huge sheep and goat. There is a need to identify and evaluate these grasslands for forage quality as these are the only source of fodder for sheep and goat in the district. Hence, a survey had been taken up to document the various plant species under grasslands along with nutritional evaluation.

## Materials and Methods

A survey has been taken up to identify and document the various species of grasses, herbs and others in grasslands of the district. Plant samples are also drawn for nutritional analysis with respect to fodder quality. The district was surveyed during lean period. The plant species were identified based on the animal affinity, existing knowledge on the species and the farmers/shepherd's counsel. The plants were sampled, collected on herbarium and local name documented; besides, the samples were collected for nutritional analysis and also pictured. At the end, the sample was identified with the help of botanist, animal nutritionist and the scientific nomenclature was documented. Nutritional parameters *viz*., crude protein, crude fibre, micronutrients like copper, iron, zinc and manganese were analysed in the samples

## Results and Discussion

The survey indicated that the grasslands of the district harbour a few grasses with little nutrition. The samples of grasses and herbs collected from the traditional grazing areas, grasslands and project areas were identified and their nutritional evaluation done (Table 1). These species hardly fulfil the nutritional requirements of grazing sheep and goat. Nevertheless, these grasses except near multipurpose project areas of Nagarjunasagar and Jurala, dry up during summer, the most important period of fodder scarcity. Often shepherds enter forests in search of greenery and face difficulties until monsoon arrival. They customarily return only after onset of monsoon to their native villages.

There is an imminent need to improve the quality of these grasslands by introducing alternate adaptable grass spp *viz*., *Chloris* spp, *Cenchrus ciliaris, Cenchrus setigerus, Lasuirus sindicus and Panicum maximum* so as to improve the year round green fodder production per unit area. Besides, the quality of grassland forage could be augmented by introduction of hardy, perennial forage legumes like *Stylosanthus* spp, *Desmanthes virigatus, Clitoria ternatea* and *Macroptilium atropurpureum.*

There is an urgent need to introduce MPTS (Multipurpose Tree Species) interspersed in the grasslands for augmenting quality and quantity of green fodder yield. Tree species belonging to genera *Acacia, Dalbergia, Hardwickia, Prosophis, Albizia* etc could easily adapt to the dry agro-climate of the district to boost grassland fodder production.

**Table 1:** Nutrition in grasses and other herbaceous species interspersed with grasses in grasslands of Mahboobnagar district, Telangana State

| Taxanomical name | Local Name | CP (%) | NDF (%) | Cu (ppm) | Fe (ppm) | Zn (ppm) | Mn (ppm) |
|---|---|---|---|---|---|---|---|
| *Urochloa mosambicensis* | Sebi Gaddi | 15.3 | 62.6 | 13.0 | 212 | 41.0 | 245 |
| *Cynadon dactylon* | Garika | 5.6 | 48.6 | 12.0 | 244 | 36.0 | 188 |
| *Paspalam dilatatum* | Dallis Gaddi | 13.1 | 47.2 | 10.4 | 273 | 23.2 | 179 |
| *Cymbopogon citronella* | Nimma Gaddi | 10.7 | 61.6 | 78 | 146 | 31.4 | 213 |
| *Cenchurus glaucus* | Buffel Grass | 10.1 | 57.2 | 8.8 | 296 | 46.4 | 171 |
| *Pennisetum pedicellatum* | Deenanath | 12.1 | 61.5 | 11.4 | 277 | 35.2 | 324 |
| *Iseilema laxum* | Erra Chengali | 12.3 | 59.4 | 11.0 | 496 | 37.0 | 377 |
| *Arachis glabrata* | Chara Badam | 10.9 | 48.7 | 10.2 | 496 | 58.4 | 239 |
| *Achyranthus aspera* | Uttareni | 13.6 | 36.2 | 12.0 | 322 | 40.8 | 212 |
| *Abutilon indicum* | Botla Benda | 7.9 | 22.4 | 12.0 | 228 | 26.0 | 218 |
| *Leucas aspera* | Tummi Koora | 6.6 | 32.2 | 12.4 | 202 | 24.0 | 320 |
| *Indigofera aspalathoides* | Barpatalam | 9.1 | 36.0 | 10.0 | 308 | 26.0 | 288 |
| *Aerva lanata* | Pindi koora | 10.5 | 22.0 | 9.1 | 218 | 32.0 | 256 |
| *Hyptis saveolens* | Kukka tulasi | 14.4 | 52.3 | 11.6 | 481 | 25.2 | 279 |

## Conclusion

The shrinking grasslands of the district are nutritionally poor and limited in expanse to feed the enormous sheep and goat population. Often their availability is restricted to peripheral areas of multipurpose projects during lean periods. There is an urgent need to enhance the quality of grasslands by introducing perennial better yielding grasses, legumes and MPTS.

## References

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